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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NAKHJAVAN, SHERVIN K

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 10/03/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/680,669

Applicant(s)

KUMAR ET AL.

Examiner

Shervin Nakhjavan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27 is/are allowed.
- 6) ☒ Claim(s) 1-23 and 25 is/are rejected.
- 7) ☒ Claim(s) 24 and 26 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2, 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Priority

1. If applicant desires priority under 35 U.S.C. 119(e) based upon a previously filed application, specific reference to the earlier filed application must be made in the instant application. For benefit claims under 35 U.S.C. 120, 121 or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of the applications. This should appear as the first sentence of the specification following the title, preferably as a separate paragraph unless it appears in an application data sheet.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 9-11 and 16-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Regarding claims 9-11 and 16-18, citations "said at least one video compressor" of claim 9, "said temporary storage" of claim 10, "the method of claim 8" of claim 16 seem to be referring to a previously cited video compressor, temporary storage and a method claim which does not appear in the claims. Therefore, theses citations are vague and confusing because it is unclear what feature or element is referred to and further limited by this language.

Claims 10, 17 and 18 are variously dependent from an indefinite claim and thus themselves are indefinite. In addition for the purposes of this office action claim 16 is treated as depending from claim 12.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al. (US 6,268,864).

Regarding claims 1-9, Chen teaches, limitation of claim 1, apparatus for processing video comprising: a segmenter for segmenting video sequences (Column 6, Lines 3-19, where the generators 25 and 27 are the segmenters segmenting the video sequence as they are received into background tracks and object tracks); a video processor for processing the video segments of the video sequences and identifying common attributes between video segments (Column 6, Lines 3-19, where the video sequence as received is analyzed and the background tracks and object tracks having corresponding same property or attribute of the objects of interest are segmented separately and identified in the video frames of the video); and a database for sorting

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processed segments of the video sequences, where a plurality of processed video segments are linked via the identified common characteristics (Column 4, Lines 33-42, where the segmented data being the background tracks or object tracks are stored in a data structure and each of the segmented tracks are linked to other tracks having within it the same object or background features as discussed in Column 12, Lines 25-48, where each of the segmented objects or background tracks or frames are linked to other frames of the same object i.e. OT1 is linked to of1);

Limitation of claim 2, apparatus further comprising: a DVD authoring tool (Column 4, Lines 48-66, where upon completion of the authoring of the video sequence the animation is stored in a DVD);

Limitation of claim 3, said DVD authoring tool provides interactive links between video segments (Column 5, Lines 53-66, where the interactive capability is discussed within a DVD storage device inherently);

Limitation of claim 4, said interactive links are based upon at least on attribute of said video segment (Column 5, Lines 62-66, where pan and zoom corresponds to attributes or different resolutions of the objects);

Limitation of claim 5, apparatus further comprising: a web page authoring tool (Column 4, Line 66 through Column 5, Line 9, where web browsing inherently directs the user to web pages for authoring and the utility is also discussed for specific environments in Column 5, Lines 12-20);

Limitation of claim 6, said web page authoring tool provides interactive links between video segments (Column 5, Lines 12-29, where interactive utility is inherent in the teaching of the passage within the web browsing of the web pages);

Limitation of claim 7, said interactive links are based upon at least one attribute of said video segment (Column 4, Line 47 through Column 5, Line 9, where the attribute is the common characteristics that segments of different objects are linked together based on implementation of different playback capabilities);

Limitation of claim 8, apparatus further comprising: a low resolution video compressor and a high resolution video compressor (column 3, Lines 35-62, where storing of the video data in different spatial resolution is inherent in addition to compressing of the data as received in figures 14a and 14b and column 20, Lines 32-38);

Limitation of claim 9, apparatus further comprising a temporary storage, coupled to said at least one video compressor, for storing said video sequence (Column 3, Lines 47-53, where video as received is stored first before processing or animation temporarily inherently).

7. Claim 12 is rejected under 35 U.S.C. 102(e) as being anticipated by Yoshio et al. (US 6,310,625).

Regarding claim 12 Yoshio teaches, limitation of claim 12, a method of image processing comprising: segmenting a video sequence into video clips (Column 8, Lines 5-9, where video is divided into clips); storing said video clips in a database with an

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associated unique identifier; storing said video clips in said database; indexing said stored video (Column 8, Lines 5-12, where clips are stored and indexed which is inherently assigning a unique identifier).

8. Claims 12-15 and 19-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Uchihachi et al. (US 6,535,639).

Regarding claims 12-15 and 19-22 , Uchihachi teaches, limitation of claim 12, a method of image processing comprising: segmenting a video sequence into video clips; storing said video clips in a database with an associated unique identifier; storing said video clips in said database; indexing said stored video (Column 5, Lines 64 through Column 10, where the video clips are generated and indexed according to Column 10, Lines 16-18, where the shots or clips are indexed in web method);

Limitation of claim 13, method further comprising accessing said database using a web page authoring tool to organize said video clips (column 10, Lines 2-15, where the client utilizing the web sight or page to compose the summary);

Limitation of claim 14, said web page authoring page tool provides interactive links between video clips (Column 2, Lines 54-60, where a web based interface with links corresponding to one or more starting points or portions of the video);

Limitation of claim 15, said interactive links are based upon at least one attribute of the video clip (column 6, Lines 4-8, where the importance of importance of the shot was a key factor or attribute in selection or indexing of the shot or clip);

Limitation of claims 19, method further comprising: adding ancillary data to said video clips (Column 9, Lines 11-13);

Limitation of claim 20, the ancillary is an annotation (Column 9, Lines 11-13);

Limitation of claim 21, the ancillary data is an index to other video clips having similar attributes (Column 9, Lines 22-26, where the coded information is the ancillary data);

Limitation of claim 22, method further comprising enhancing the stored video clips (Column 9, Lines 11-20, where the displaying of the frames can have less contrast).

9. Claims 12 and 16-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Brodersen et al. (US 6,453,459).

Regarding claims 12 and 16-18, Brodersen teaches, limitation of claim 12, a method of image processing comprising: segmenting a video sequence into video clips; storing said video clips in a database with an associated unique identifier; storing said video clips in said database; indexing said stored video (Column 1, Line 60 through Column 2, Line 1, where segmenting of the video is performed and unique identifier is associated with the clip stored in a database inherently i.e. clip1 1154a through clip-CL and in addition the indexing is also performed on objects of video Column 15, Lines 20-40, where links to other objects are created as well by adding or deleting a chapter);

Limitation of claim 16, method further comprising: compressing said video clips and said video sequence using a high resolution compressor; a DVD authoring tool for

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organizing said compressed video clips and video sequence onto a DVD (Column 9, Lines 30-47, where the video data is encoded in accordance with DVD disk format specification);

Limitation of claim 17, said DVD authoring tool provides interactive links between compressed video clips (Column 13, Lines 22-42, where interactive linking of the segments or clips to one another or as discussed to an event which is also a pre-stored clip is performed);

Limitation of claim 18, said interactive links are based upon at least one attribute of the compressed video clip (Column 13, Lines 45-52, where conclusion of a chapter is the attribute of the clip for interactive linking to particular other chapter or clip).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. in view of Balram et al. (US 6,034,733).

Regarding claims 10 and 11 Chen teaches number of limitations of the claims however, Chen fails to specifically teach signal enhancing of the video sequence of the claims. Balram teaches signal enhancing of the video sequence comprising deinterlacing the video signal of claim 11 (Column 3, Lines 1-17). It would have been

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obvious to an ordinary skilled in the art to utilize deinterlacing circuit of Balram with Chen's system because, it eliminate blurry conditions which could lead to error in Chen's scene detection in presence of significant motion.

12. Claims 22, 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshio et al. in view of Balram et al..

Regarding claims 22, 23 and 25, Yoshio teaches number of limitations of the claims however, Yoshio fails to specifically teach, enhancing the video clips by reducing noise or deinterlacing. Balram teaches enhancing of a video signal by deinterlacing of the signal or video sequence (Column 3, Lines 1-17). It would have been obvious to an ordinary skilled in the art to utilize Balrams noise reduction by deinterlacing of images because, it would eliminate blurring of the images received from camera in organization of the scenes for display.

Allowable Subject Matter

13. Claims 24 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record (specifically Irani et al. US 5,768,447) does not teach the image noise reduction method of claim 24 of the combined elements and the specific deinterlacing steps of claim 25.

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14. The following is an examiner's statement of reasons for allowance: claim 27 is allowed because, the prior art of record specifically Irani et al. US 5,768,447 does not teach deinterlacing of a sequence of images as outlined in claim 27.

Other prior art cited

15. Prior art of record cited and not relied upon is considered pertinent to applicant's disclosure.

The US Patent 6,546,185; US Patent 6,496,981; US Patent 6,462,754; US Patent 6,343,298; US Patent 6,278,446; US Patent 6,195,458; US Patent 6,157,929; US Patent 5,969,755; US Patent 5,805,733; US Patent 5,590,262 and US Patent 5,559,949 variously teach segmenting an image sequence and storing related to applicant's invention as claimed.

Contact information

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shervin Nakhjavan whose telephone number is (703) 306-5916. The examiner can normally be reached on Monday through Friday from 8:00 am to 5:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau, can be reached at (703) 305-4706.

Any response to this action should be mailed to:

Assistant Commissioner for Patents
Washington, DC 20231

Or faxed to:

(703) 872-9306 for ***formal*** communications, please mark "**EXPEDITED PROCEDURE**"

or:


for ***informal*** or ***draft*** communications; please label "**PROPOSED**" or "**DRAFT**".

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Hand delivered responses should be brought to Crystal Park 2, 2121 Crystal drive, Arlington, VA, sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Tech center 2700 customer service office **(703) 306-0377**.

Shervin Nakhjavan *SN*
Patent Examiner
Group Art Unit 2621
September 23, 2003.

A handwritten signature in black ink, appearing to read "Andrew W. Johns", with a large, sweeping flourish extending from the end of the name.

**ANDREW W. JOHNS
PRIMARY EXAMINER**